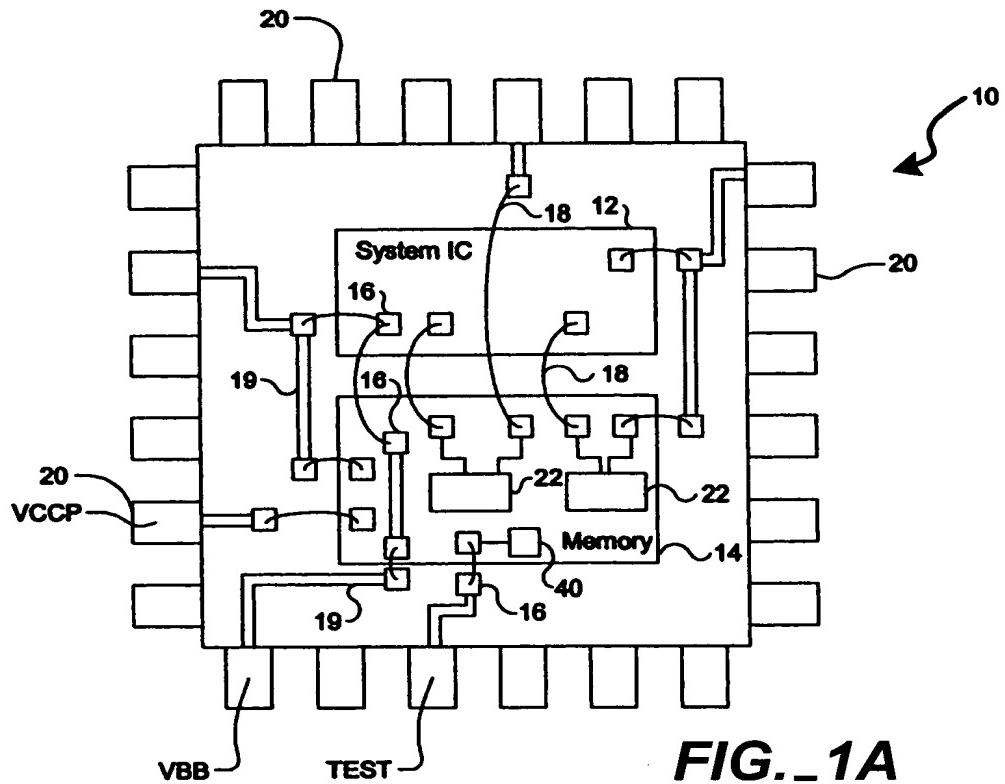


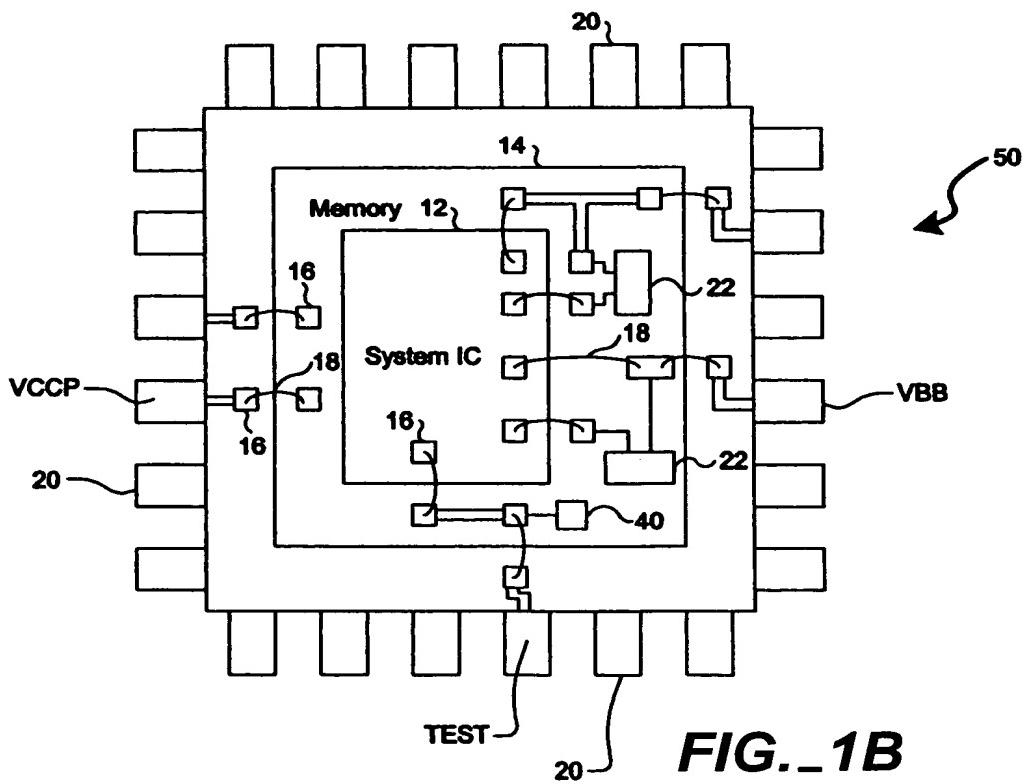


"Bonding Pads for Testing of a Semiconductor Device"  
 Inventor: Adrian E. Ong  
 Appl. Serial No.: 10/608,613  
 Sheet 1 of 17  
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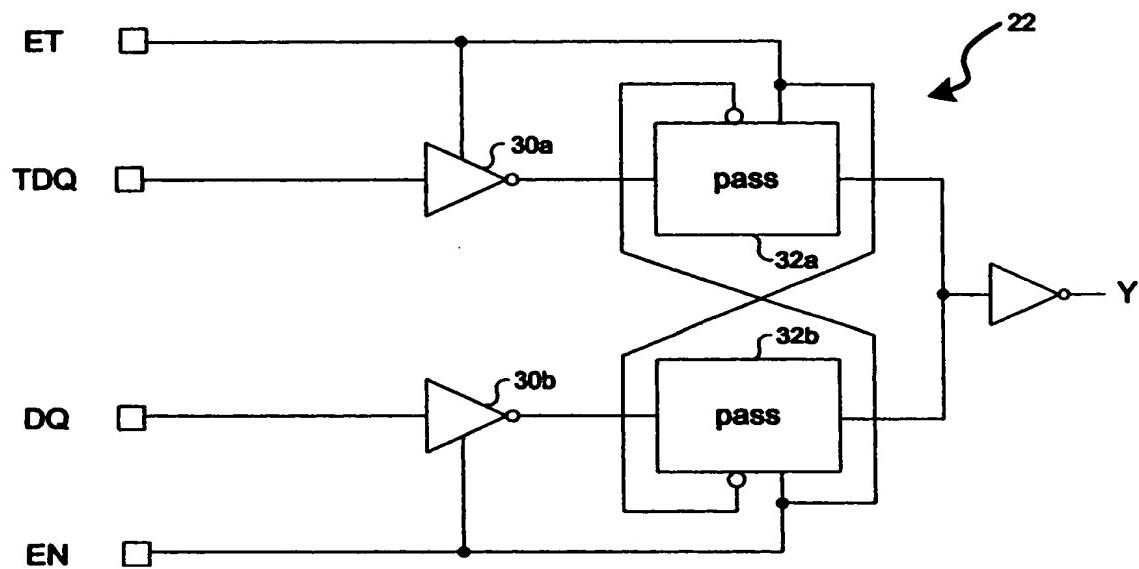
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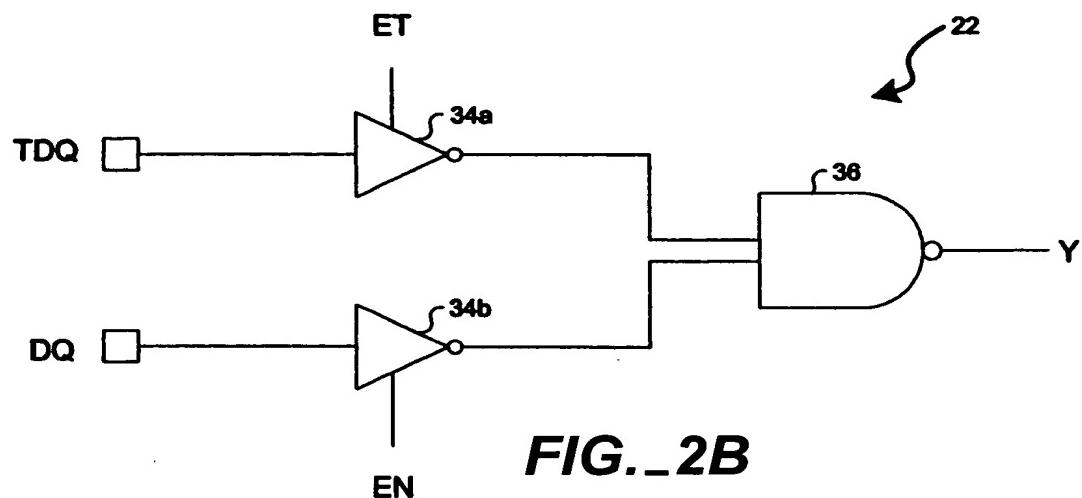
**FIG. 1A**



**FIG. 1B**

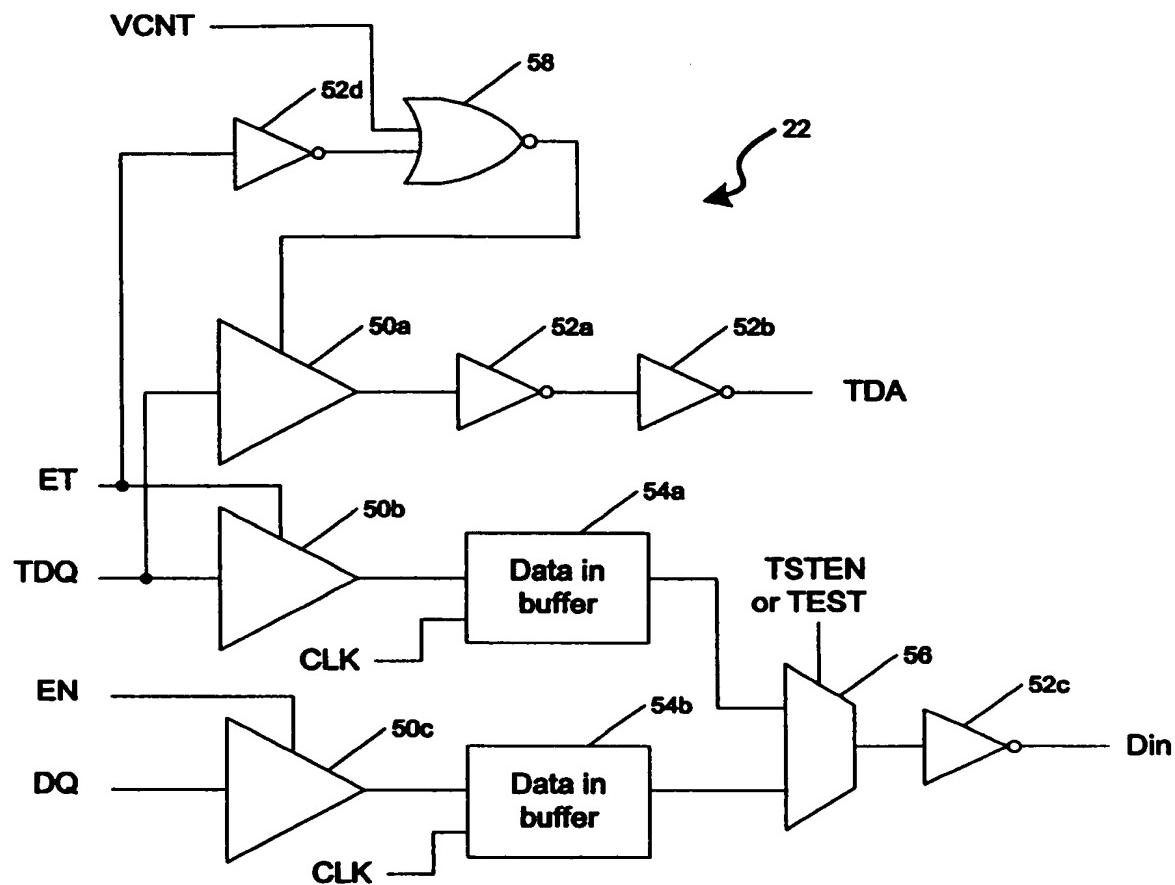


**FIG.\_2A**

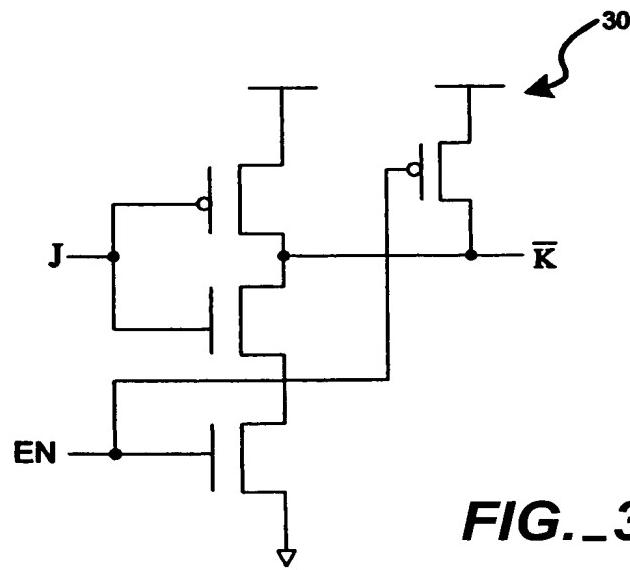


**FIG.\_2B**

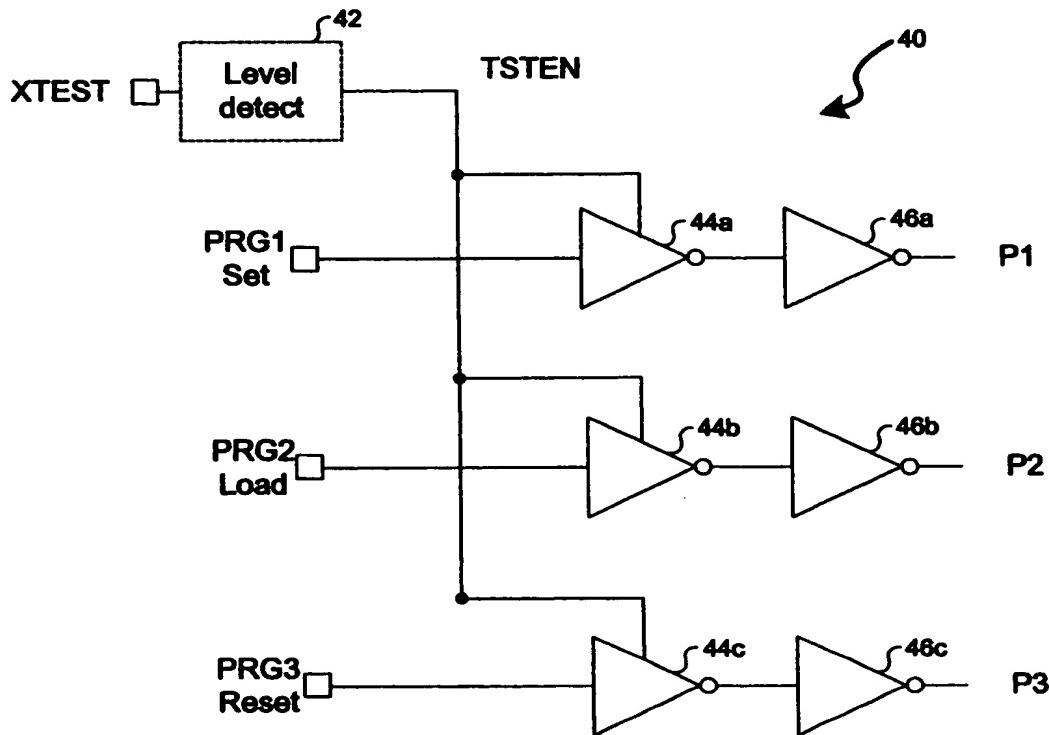
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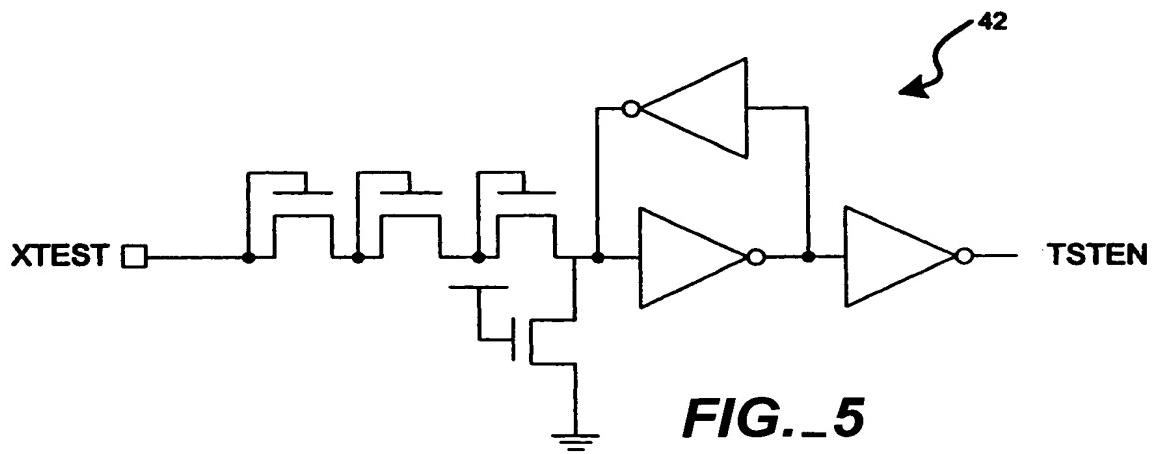
**FIG.\_2C**



**FIG.\_3**

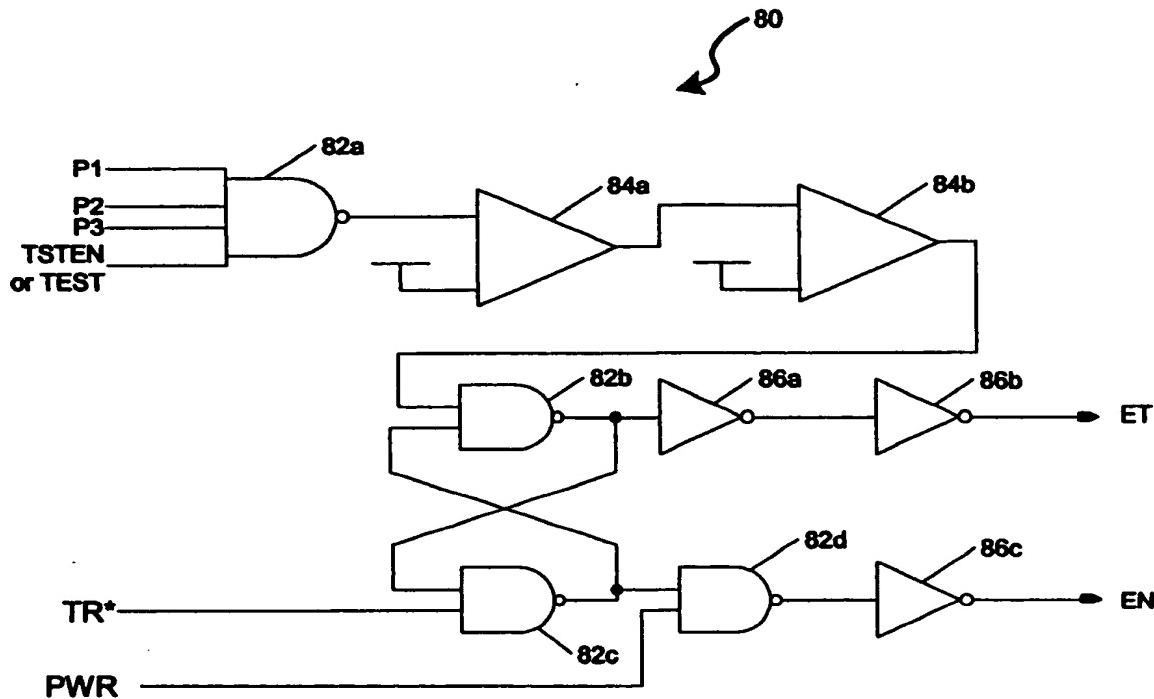


**FIG.\_4**

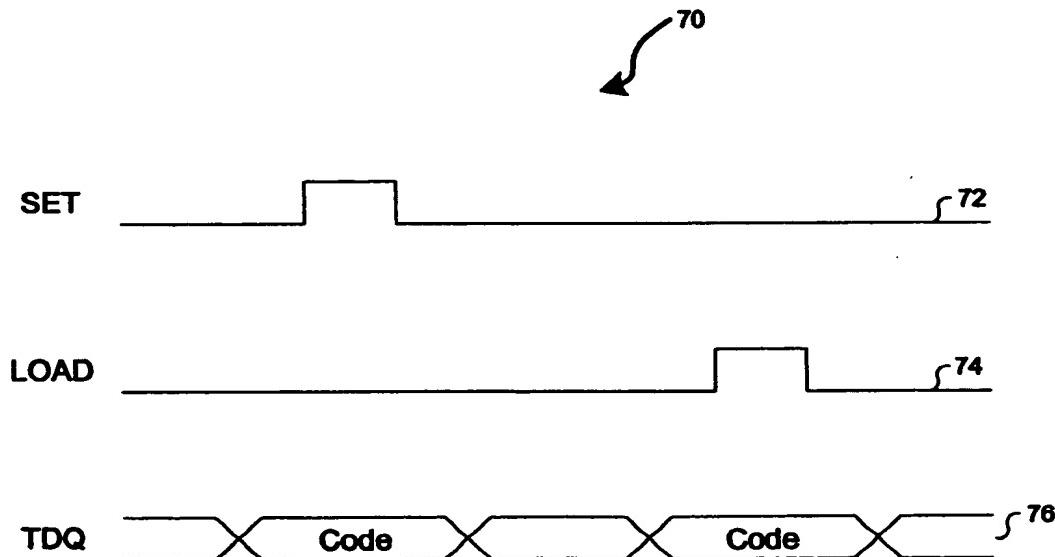


**FIG.\_5**

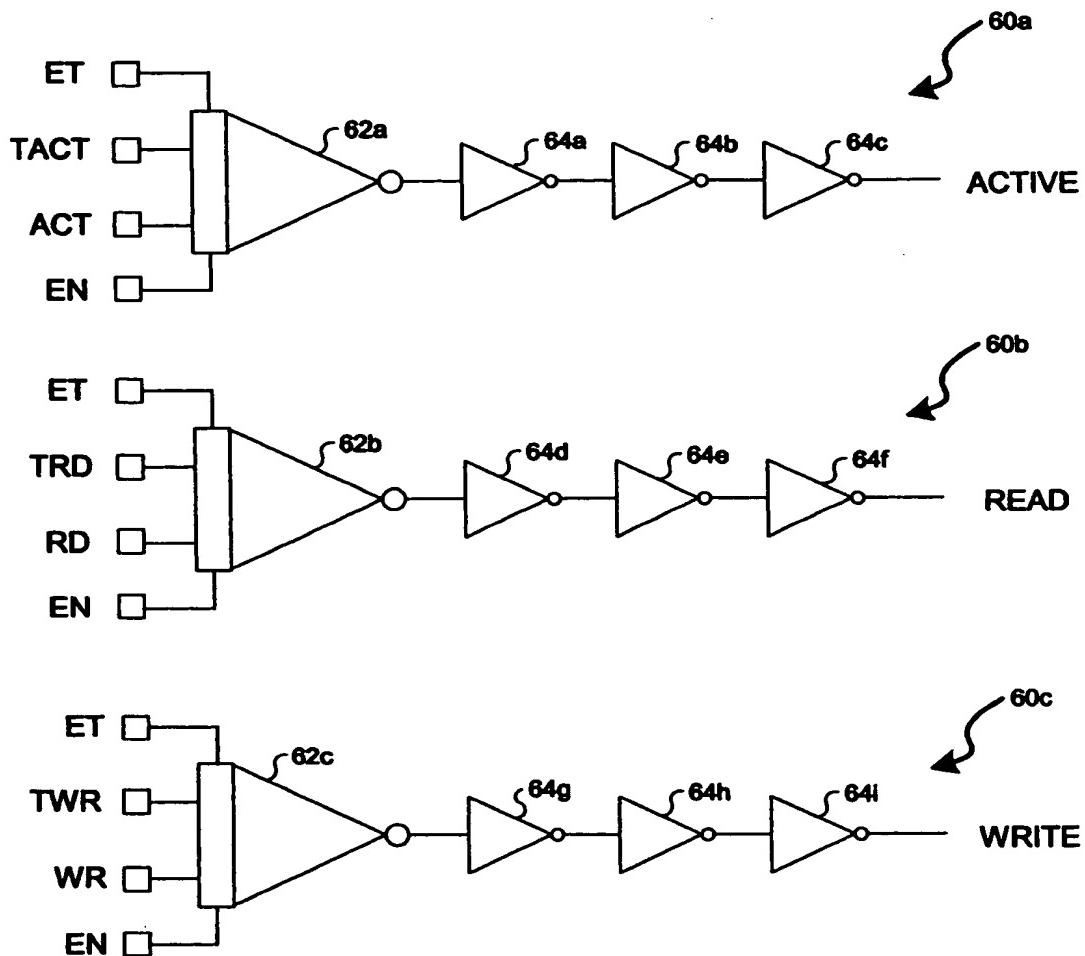
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**FIG. 6**



**FIG. 8**



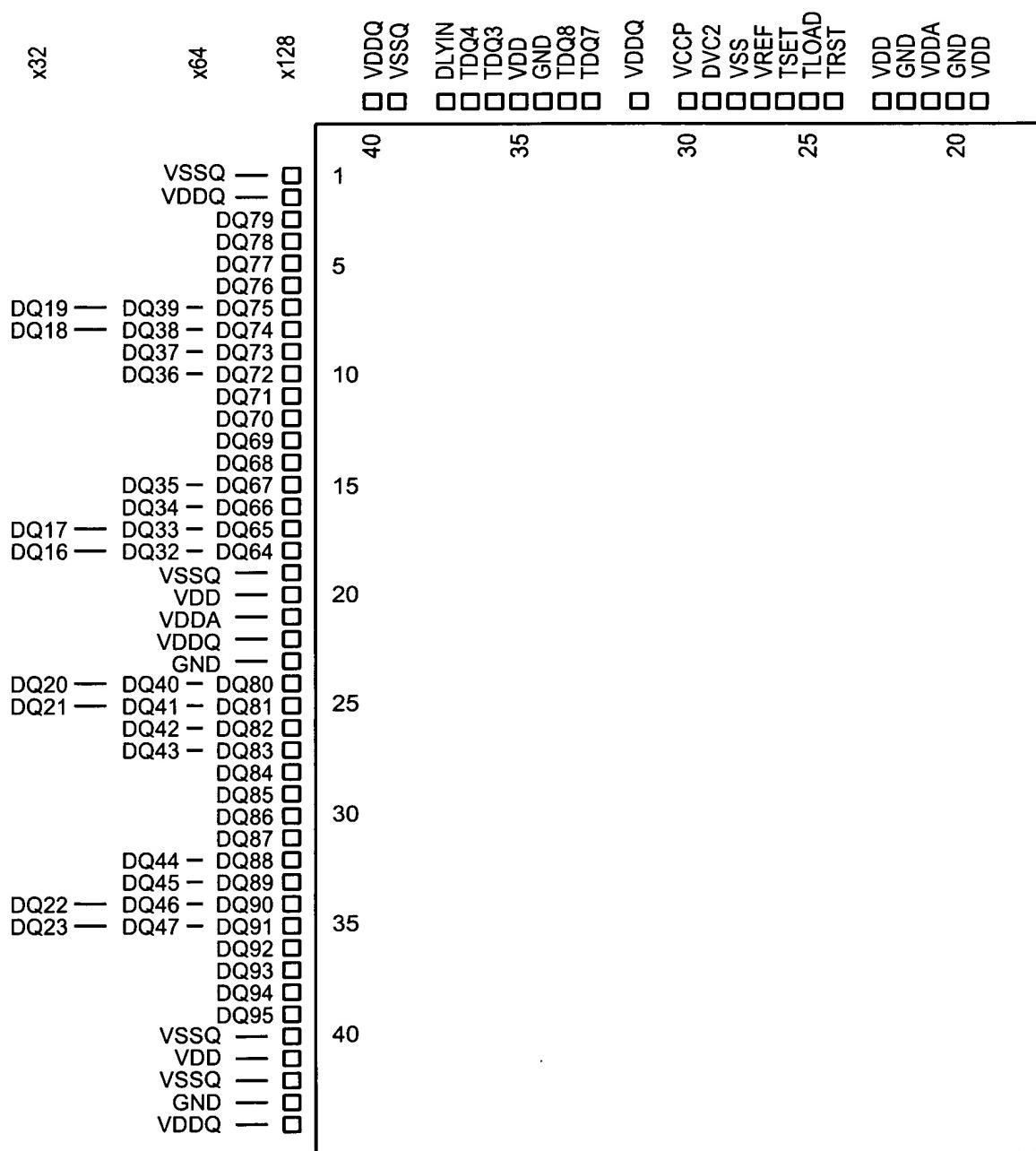
**FIG.\_7**

## ***FIG.\_9A***

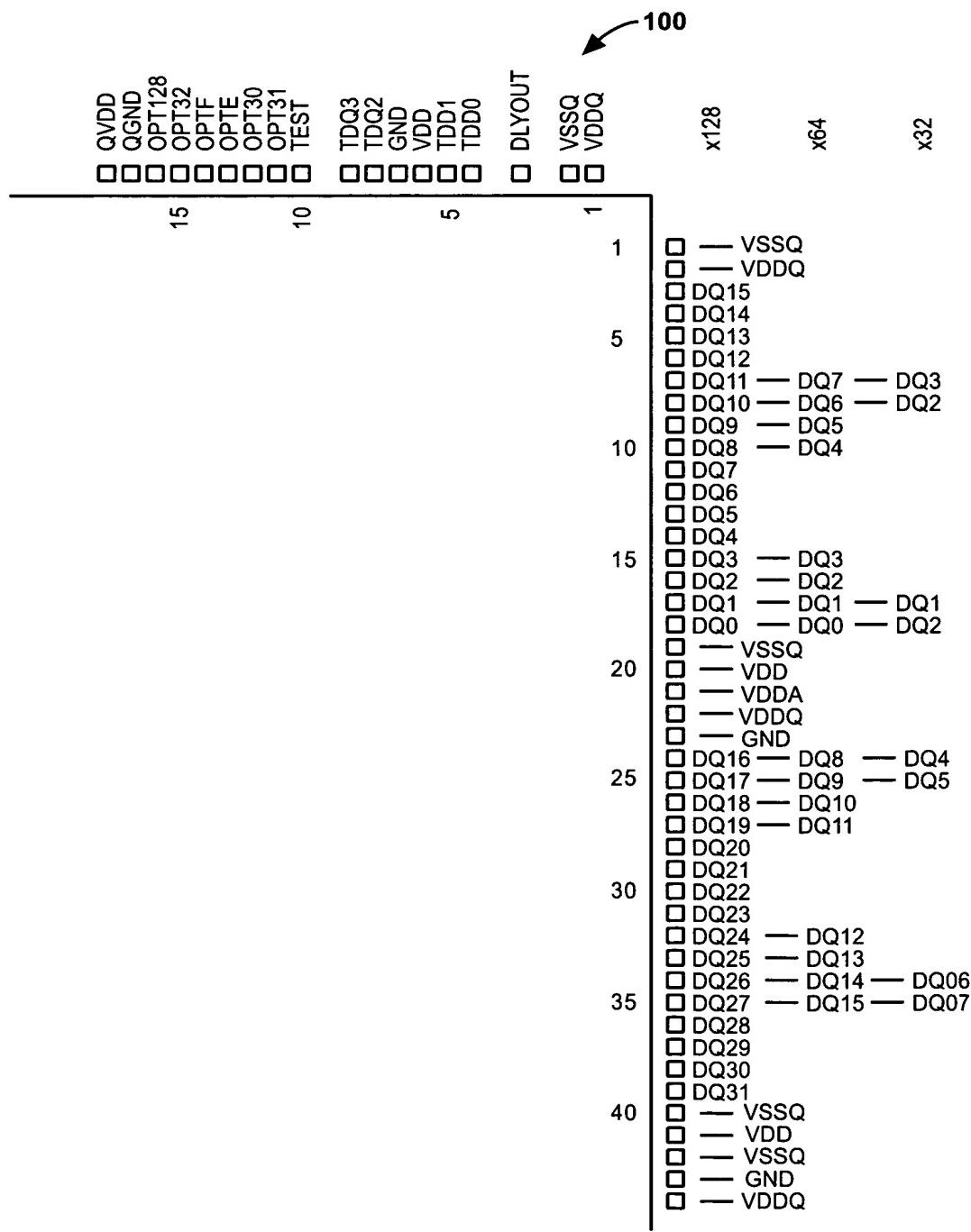
***FIG.\_9A-1 FIG.\_9A-2***

***FIG.\_9A-3 FIG.\_9A-4***

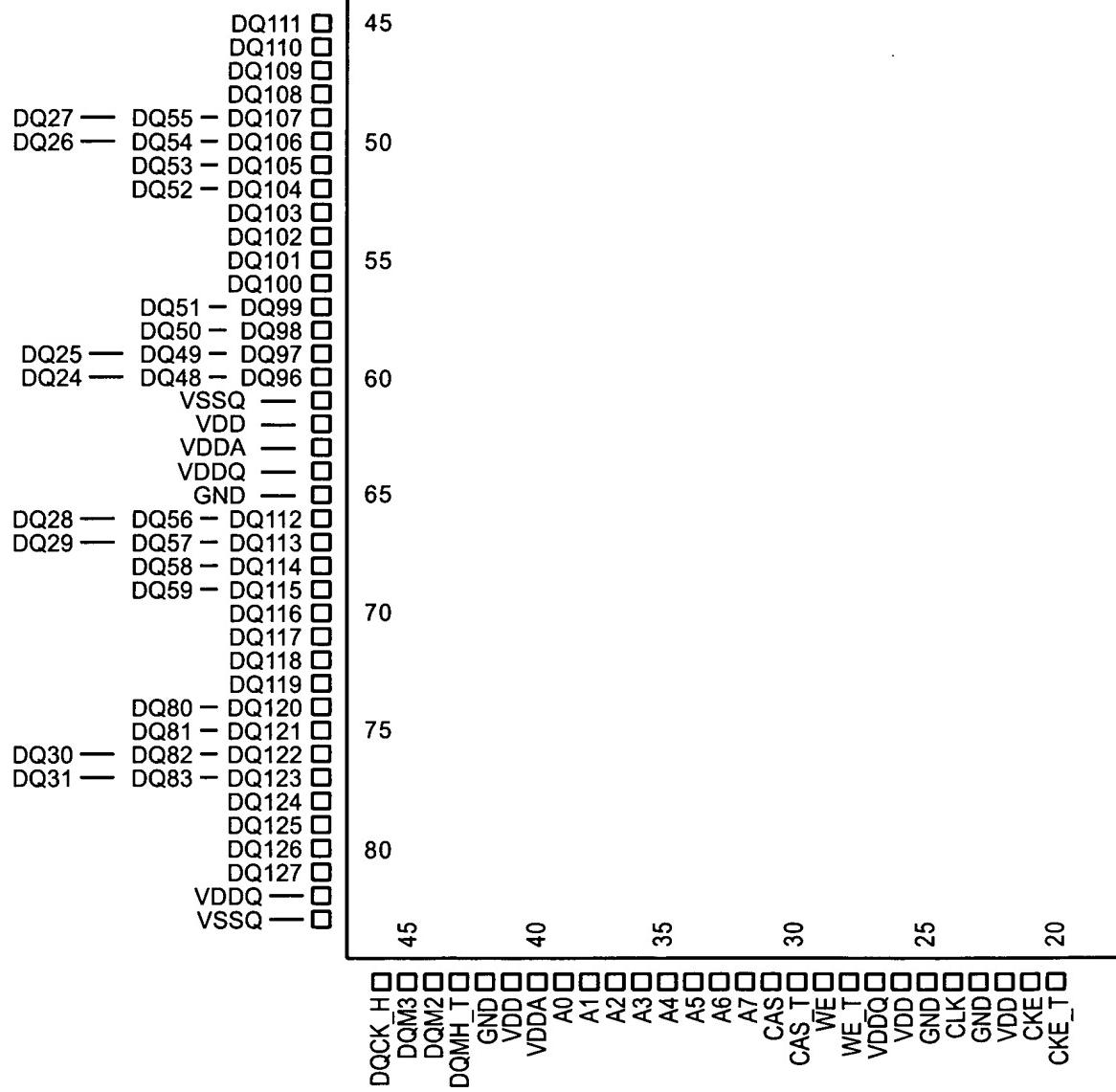
### ***FIG.\_9A-1***



**FIG.\_9A-2**

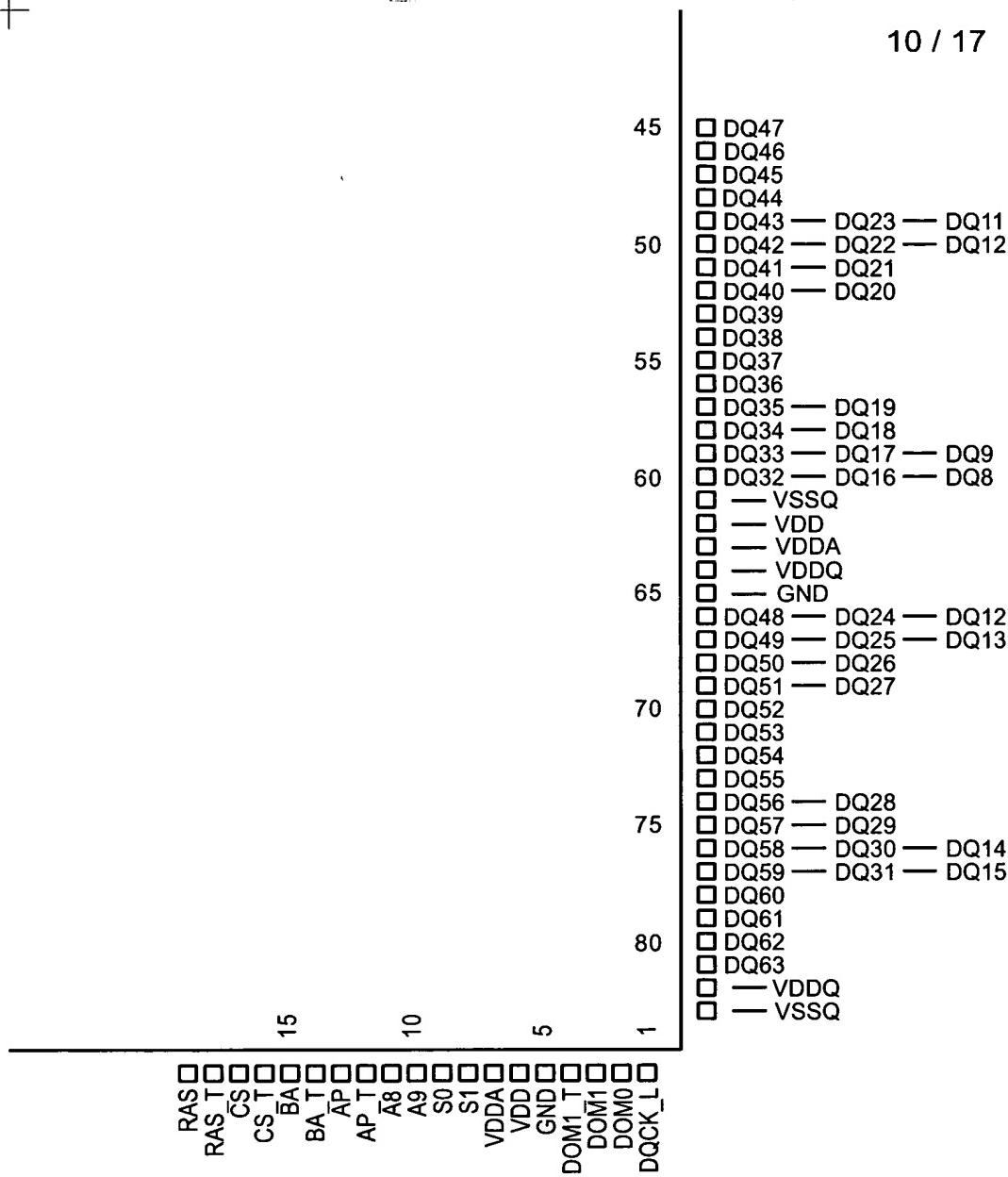


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***FIG.\_9A-3***

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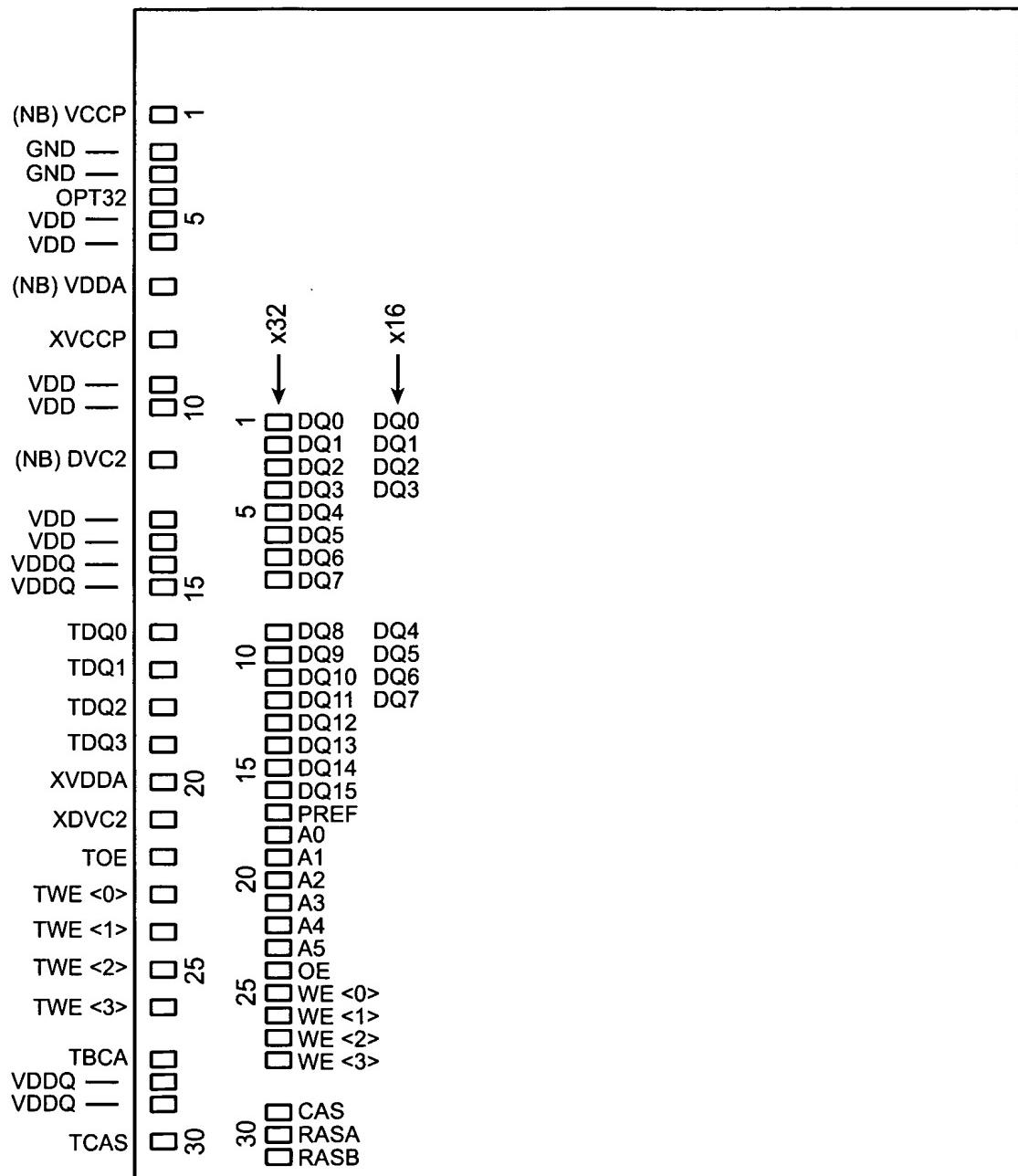
**FIG.\_9A-4**

**FIG.\_9B**

FIG.-9B-1

FIG.-9B-2

**FIG.-9B-1**



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TRASA	□	A6
TRASB	□	A7
XVBB	□	A8
		A9
		A10
		A11
		BCA
RESET	□	DQ16 DQ8
TDQ4	□	DQ17 DQ9
	35	DQ18 DQ10
TDQ5	□	DQ19 DQ11
TDQ6	□	DQ20
	40	DQ21
TDQ7	□	DQ22
	45	DQ23
(NB) VDDA	□	DQ24 DQ12
VDDQ	—	DQ25 DQ13
VDDQ	—	DQ26 DQ14
GND	—	DQ27 DQ15
GND	—	DQ28
	50	DQ29
	55	DQ30
(NB) OPTF	□	DQ31
	45	TEST
GND	—	DCAS
GND	—	
GND	—	
GND	—	
SET	□	
LOAD	□	
VDD	—	
VDD	—	
(NB) VBB	□	
	50	
	53	

**FIG.\_9B-2**

**FIG.\_9C**

**FIG.\_9C-1**

**FIG.\_9C-2**

300

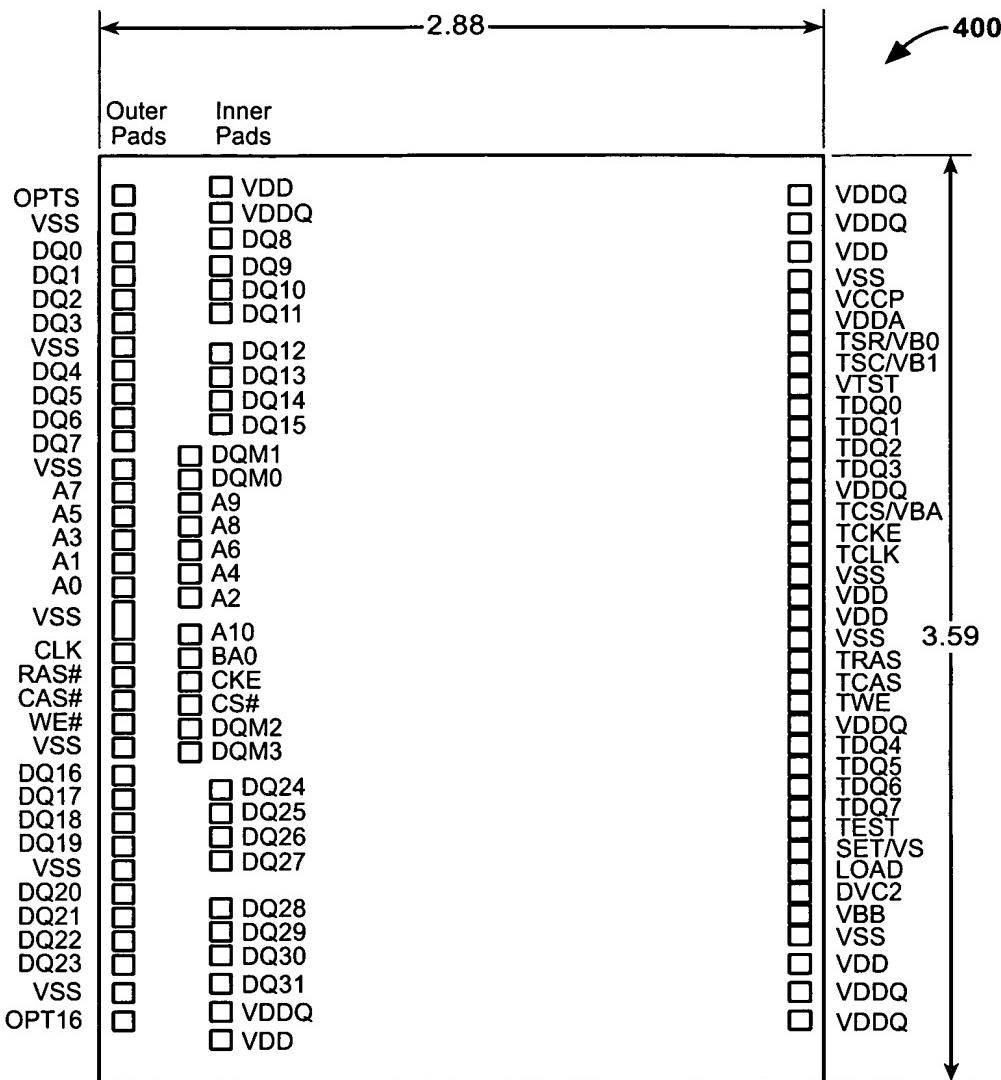
**FIG.\_9C-1**

VBB	1
SET	
GND	
OPTF	5
VDD	
DVC2	
TSC	
LOAD	
TSR	
TCKE	10
CKE	
DQ <9>	
GND	
VDDQ	
VDDQ	15
A <6>	
TD <7>	
TEST	
DQ <15>	
DQ <11>	20
VDDQ	
VDD	
GND	
A <9>	
DQ <14>	25
DQ <15>	
A <7>	
DQ <10>	
DQ <12>	
TCS	
TCS	30
TD <8>	
TD <5>	
TCLK	
TD <4>	35
TD <3>	
GND	
A <11>	
A <4>	
DQ <8>	40
DQMH	
A <12>	
OPTS	
CLK	
A <5>	45
A <8>	
DQVL	
TD <2>	
A <18>	
DQ <7>	50
TD <1>	
CS	
VDD	
VDDQ	
OPTXSH	55
DQ <5>	
DQ <3>	
OPTXSL	
GND	
GND	60

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A <2>	
DQ <1>	
WE	
TD <8>	
TREDA <8>	65
DQ <2>	
TWE	
TCAS	
DQ <8>	
TREDA <1>	70
VDDQ	
VDCF	
CAS	
DQ <5>	
DQ <4>	75
BA <3>	
A <2>	
BA <1>	
VDD	
A <1>	80
A <3>	
RAS	
TRAS	
GND	84

**FIG.\_9C-2**



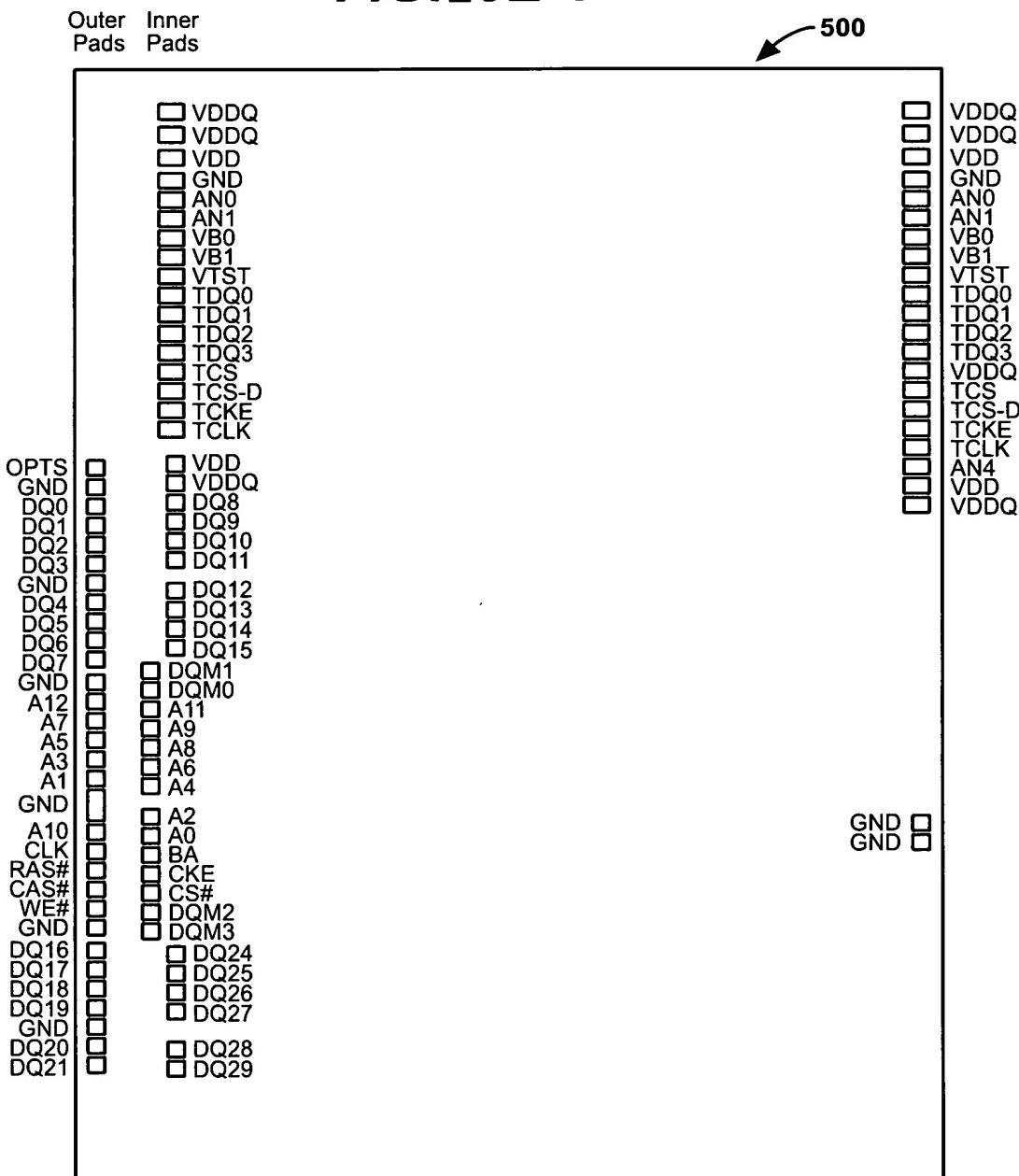
**FIG.\_9D**

FIG.-9E

FIG.-9E-1

FIG.-9E-2

**FIG.\_9E-1**



+  
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**FIG.\_9E-2**

+